CHAPTER - V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary:

The purpose of the present study was to determine the effect of specific training programme on performance ability of kho-kho players. Recent years have witnessed a revolution in the area of sports and sports performance has been receiving phenomenal attention. In this new orientation the emphasis has shifted to a more progressive research leading to an understanding of performance factor of various sports.

The way in which explosive Strength, Speed, endurance and agility exercises triggered the efficiency of kho-kho players was not much known and still remains to be studied in depth. In order to achieve optimum performance, various varieties of exercises that help to improve performance abilities and quite a few are being introduced in the field.

Strength, Speed, Endurance and Agility exercises are also looked upon as a system of exercises that helps to improve performance abilities. While only limited generalization can be drawn from the fragmentary data on kho-kho players. Scientific information is being gradually accumulated which will serve as a guideline for developing more adequate exercise programme for kho-kho players at different levels. This is true about the effect of explosive strength, speed, endurance, and agility exercise on performance ability of kho-kho players. We have more beliefs and conviction but few facts. This does not mean to imply that there is no effect but still we lack sufficiently adequate and objective evidence to throw light on various aspects of performance abilities through the practice of exercises the present study was undertaken
The problem for the present investigation was to “study the effect of explosive Strength, Speed, endurance and agility exercises on performance ability of kho-kho players”.

For the present study sixty kho-kho district level players of Mumbai city, with age ranging from Fourteen to Eighteen years, were selected as subjects and divided randomly and equally into two groups namely Experimental Group and Control Group.

The Experimental group was progressively introduced to the practice of selected exercises; five meters run, ten meters run, thirty meters run and fifty meters run, Shuttle run, Continues run, Fartlek, Sit-ups, Squat Jump, Bouncing exercises, Stepping exercises, Squat thrust, Frog leaps, Star jump. The subjects performed exercises six days a week for a period of forty five to seventy five minutes with rest in between and had only one session a day; Sunday was observed as rest day. The Control group did not participate any training programme except their regular club practice.

Both the groups were tested before, completion of four week, eight weeks and after the expiry of experimental Period of twelve weeks with same procedure by following standard test, keeping in mind its wider range of application and nature, as well as administrative feasibility. Sit ups were administered to measure abdominal strength, fifty meters run to measure running speed, Shuttle run to measure agility, Push-ups to measure explosive arms strength, Standing broad Jump to measure explosive strength of legs, Harvard step test to measure cardiovascular endurance, Halt squat test to measure local muscular endurance of legs, Squat thrust to measure agility and coordination, Penny cup test to measure reaction time and Performance rating was done by the panel of experts to assess performance ability in Kho-Kho. The data of both the group were computed statistically by using “Trend analysis method” to see progressive achievements.
CONCLUSION

Based on the findings and within the Limitation of the study it is noticed that practice of selected exercises helped to improve performance ability of kho-kho players. It was seen that there is progressive improvement in the performance of Experimental group kho-kho players after four weeks, eight weeks, and twelve weeks of training programme. Further practice of exercises also helps to improve other fitness factors viz-explosive strength, (leg, arm, abdomen) running speed, reaction time, cardiovascular and local muscular endurance, agility and coordination that play major role in performance. There was no significant improvement found in performance and other fitness variables of control group, while comparing pre and post-test mean score following conclusion were drawn.

1. The mean of abdominal strength of Experimental group (18.38) and Control group (16.15) differ significantly.

1.1. There was a significant effect of treatment on abdominal strength (16.29).

1.2. Further there was significant effect of trials on abdominal strength (510.677).

1.3 The result also indicated that there was a significant effect of the interaction between treatment and trials on abdominal strength (59.24139).

1.4 The trend was linear (1525.055) which indicated the increase in abdominal strength with the increase in trials (treatment).

2. The mean of leg endurance Of Experimental group (56.51) and Control group (51.20) differ significantly.
2.1. There was a significant effect of treatment on leg endurance (9.8073).

2.2. Further there was significant effect of trials on leg endurance (127.454).

2.3. The result also indicated that there was a significant effect of the interaction between treatment and trials on leg endurance (16.336).

2.4. The trend was linear (381.91) which indicated the increase in leg endurance with the increase in trials (treatment).

3. The mean of agility and co-ordination of Experimental group (32.50) and Control group (31.0) differ significantly.

3.1. There was a significant effect of treatment on agility and co-ordination (64.01667).

3.2. Further there was significant effect of trials on agility and co-ordination (50.9803).

3.3. The result also indicated that there was a significant effect of the interaction between treatment and trials on agility and co-ordination (3.349).

3.4. The trend was linear (16.795) which indicated the increase in agility and co-ordination with the increase in trials (treatment).

4. The mean of agility tested on shuttle run of Experimental group (11.14) and Control group (11.44) differ significantly.

4.1. There was a significant effect of treatment on agility (135.975).

4.2. Further there was significant effect of trials on agility (286.465).

4.3. The result also indicated that there was a significant effect of the interaction between treatment and trials on agility (59.5109).
4.4 The trend was linear (801.4) which indicated the increase in agility with the increase in trials (treatment).

5. The mean of reaction time tested penny cup test of Experimental group (37.04) and Control group (38.20) differ significantly.

5.1. There was a significant effect of treatment on reaction time (57.258).

5.2. Further there was significant effect of trials on reaction time (180.549).

5.3 The result also indicated that there was a significant effect of the interaction between treatment and trials on reaction time (70.775).

5.4 The trend was linear (448.79) which indicated the increase in reaction time with the increase in trials (treatment).

6. The mean of running speed tested on fifty meters run of Experimental group (6.82) and Control group (7.03) differ significantly.

6.1. There was a significant effect of treatment on running speed (20.628).

6.2. Further there was significant effect of trials on running speed (29.435).

6.3 The result also indicated that there was a significant effect of the interaction between treatment and trials on running speed (59.0617).

6.4 The trend was linear (51.1907) which indicated the increase in running speed with the increase in trials (treatment).

7. The mean of arm strength (explosive) tested by push-ups test of Experimental group (16.25) and Control group (15.25) differ significantly.
7.1. There was a significant effect of treatment on arm strength (explosive) (365.517).

7.2. Further there was significant effect of trials on arm strength (explosive) (350.47).

7.3 The result also indicated that there was a significant effect of the interaction between treatment and trials on arm strength (explosive) (191.01).

7.4 The trend was linear (1051.497) which indicated the increase in arm strength (explosive) with the increase in trials (treatment).

8. The mean of cardio-vascular Endurance tested on Harvard step test of experimental group (90.16) and Control group (88.74) differ significantly.

8.1. There was a significant effect of treatment on cardio-vascular endurance (35.323).

8.2. Further there was significant effect of trials on cardio-vascular endurance (307.1215).

8.3 The result also indicated that there was a significant effect of the interaction between treatment and trials on cardio-vascular endurance (90.1915).

8.4 The trend was linear (918.94) which indicated the increase in cardio-vascular endurance with the increase in trials (treatment).

9. The mean of leg strength (explosive) tested on standing broad jump test of Experimental group (1.80) and Control group (1.75) differs significantly.

9.1. There was an insignificant effect of treatment on leg strength (explosive) (3.834).
9.2. Further there was significant effect of trials on leg strength (explosive) (39.586).

9.3 The result also indicated that there was a significant effect of the interaction between treatment and trials on leg strength (explosive) (47.3939).

9.4 The trend was linear (32.32) which indicated the increase in leg strength (explosive) with the increase in trials (treatment).

10. The mean of kho-kho performance ability tested by kho-kho performance rating of Experimental group (58.54) and Control group (55.75) differ significantly.

10.1. There was a significant effect of treatment on kho-kho performance ability (331.27).

10.2. Further there was significant effect of trials on kho-kho performance ability (408.49).

10.3 The result also indicated that there was a significant effect of the interaction between treatment and trials on kho-kho performance ability (24.003).

10.4 The trend was linear (1285.19) which indicated the increase in kho-kho performance ability with the increase in trials (treatment).
RECOMMENDATIONS.

1. In the light of the conclusions of the present study it is recommended that more studies be conducted to verify these results using longer period of exercise Programme and with more practice session each day.

2. Researches also may be conducted to ascertain whether or not, practice of explosive strength, Speed, endurance and agility exercises help to improve performance ability in other age group and sex.

3. The scholar emphasizes the need for additional studies that would help various authorities and coaches to decide about time allotment for these exercises.

4. It is recommended that the studies of short and long duration may be conducted on both sexes and for other age groups.

5. Review revealed that few studies have been undertaken to determine the relationship between Strength, Speed, and endurance and agility exercises and Physical performance, hence more extensive studies may be conducted to further explore the true relationship.

6. No attempts seem to have been exerted to relate physical fitness of other level of both sexes with these exercises as an independent variable. This could not be attempted in the present study, hence further research is recommended in future.
7. The standards of performance differ from place to place owing to environmental, social and emotional conditions, so a study may be conducted on a wider scale covering the whole country.

8. Similar studies may be conducted in other indigenous activities at school and college level students.

9. The present findings refer to particular population and subject/sample and it is very likely that the findings are applicable to all levels of kho-kho players, however before making any generalization, more elaborate studies be conducted to be more reliable.